

REMARKS

Claims 1, 12, 14, 15, 23, 25, and 27 are amended. No new subject matter is added. Claims 13 and 24 are cancelled. Reconsideration and allowance of claims 1-12, 14-23, and 25-27 is requested in light of the following remarks.

Allowable Subject Matter

Claims 19-22 are allowed.

Claims 4-11, 13-18, and 24-27 are objected to as being dependent upon a rejected base claim, but are indicated to be otherwise allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

Claim Rejections – 35 USC § 103

Claims 1-3, 12, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,995,424 to Lawrence et al. ("Lawrence") in view of U.S. Patent Application Publication No. 2003/0035328 to Hamamatsu et al. ("Hamamatsu"). The applicants disagree.

Independent claim 1 recites a method comprising, *inter alia*, coupling a tester to a buffer chip that is located on a DIMM using a first set of pins on the buffer chip, and coupling a plurality of DRAM modules that are located on the DIMM to a second set of pins on the buffer chip.

It is stated that Lawrence "does not explicitly disclose coupling a tester to a buffer chip that is located on a DIMM using a first set of pins on the buffer chip." The applicants agree with this statement but would also add that Lawrence does not implicitly disclose such a feature either.

Furthermore, Lawrence does not show a buffer chip that is located on a DIMM. Thus, Lawrence also fails to teach the recited feature of "coupling a plurality of DRAM modules that are located on the DIMM to a second set of pins on the buffer chip."

Claim 1 is amended to recite that the first set of pins is structured to carry address, command, and data signals during a normal operation of the DIMM. This feature is fully supported by the original application at, e.g., page 5, lines 14-16.

Hamamatsu discloses in FIG. 1 a semiconductor module 100 having registered buffers 30, 40 (para. 0098). Hamamatsu teaches that the registered buffers 30 and 40 receive address signals A0-A11, a row address strobe signal RAS, a column address strobe signal CAS, a write enable signal WE, and a chip select signal CS through external terminals (para. 0098; FIG. 1). The registered buffers 30, 40 convert these signals to predetermined voltage levels before supplying them to the DRAMs (para. 0098; FIG. 1). On the other hand, Hamamatsu teaches that write data is directly input to the DRAMs and read data is directly output from the DRAMs via the I/O terminal DQ (para. 0099; FIG. 1).

Consequently, contrary to the newly recited feature of claim 1, Hamamatsu's registered buffers 30, 40 do not have a first set of pins that are structured to carry address, command, *and data signals* during a normal operation of the DIMM (emphasis added).

For the above reason, the Lawrence/Hamamatsu combination fails to establish *prima facie* obviousness for claim 1 because it does not teach or suggest all the features recited in the claim. MPEP 2143.03, *citing In re Royka*, 490 F.2d 981 (CCPA 1974).

Claims 2-11 depend from claim 1. Consequently, claims 2-11 are also allowable over the Lawrence/Hamamatsu combination at least for the reason that any claim that depends from a nonobvious independent claim is also nonobvious. MPEP 2143.03, *citing In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Independent claim 12 is amended to recite the subject matter that is contained in dependent claim 13, which was previously indicated to contain allowable subject matter. Claim 13 is cancelled. Claims 14 and 15 are amended to depend from claim 12.

Claims 14-18 depend from claim 12. Claims 14-18 were previously indicated to contain allowable subject matter, and they now depend from an allowable base claim.

Thus, the applicants submit that claims 12 and 14-18 are in condition for allowance.

Independent claim 23 is amended to recite the subject matter that is contained in dependent claim 24, which was previously indicated to contain allowable subject matter. Claim 24 is cancelled. Claims 25 and 27 are amended to depend from claim 23.

Claims 25-27 depend from claim 23. Claims 25-27 were previously indicated to contain allowable subject matter, and they now depend from allowable base claim 23.


Thus, the applicants submit that claims 23 and 25-27 are in condition for allowance.

Conclusion

For the foregoing reasons, reconsideration and allowance of claims 1-12, 14-23, and 25-27 is requested. Please telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,


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